

1871.	R.A.	Decl.	Log Δ .	Log r .	$\frac{1}{r^2 \Delta^2}$
Sept. 25	124° 22' 5	54° 2' 1	0.1335	0.1530	0.27
27	126° 3' 1	53° 1' 3			
29	127° 40' 8	51° 57' 2	0.1134	0.1413	0.31
Oct. 1	129° 15' 7	50° 49' 5			
3	130° 47' 8	49° 37' 9	0.0924	0.1297	0.36
5	132° 17' 3	48° 22' 4			
7	133° 44' 3	47° 2' 6	0.0706	0.1180	0.42
9	135° 8' 9	45° 38' 4			
11	136° 31' 3	44° 9' 4	0.0479	0.1065	0.49
13	137° 51' 5	42° 35' 5			
15	139° 9' 7	40° 56' 3	0.0245	0.0951	0.58
17	140° 25' 9	39° 11' 4			
19	141° 40' 0	+37° 20' 8	0.0003	0.0839	0.68

The comet's track in the heavens would, therefore, appear to be very favourable for observation in these latitudes.

Note on the Re-appearance of Encke's Comet in 1871.

By J. R. Hind, F.R.S.

The approaching re-appearance of the Comet of Encke is likely to take place under nearly the most favourable circumstances possible for observation in the Northern hemisphere. Complete ephemerides will no doubt be issued from Berlin in due time. Meanwhile the following places may serve to indicate its earlier position in the heavens. They are computed on the assumption that the perihelion passage takes place in 1871, Dec. 29° 0, which is about the time assigned by Prof. Förster's elements for the last return in 1868, neglecting perturbations.

ob G.M.T.	R.A.	Decl.	Log. Δ .
Aug. 21	31° 11'	+24° 4'	0.1929
31	31° 48	26° 0	0.1284
Sept. 10	31° 32	28° 8	0.0561
20	29° 57	30° 32	9.9750
30	26° 18	33° 13	9.8842
Oct. 10	19° 19	+36° 4	9.7841

On De Vico's Comet of Short Period. By J. R. Hind, F.R.S.

It is well known that the periodical comet detected by De Vico at Rome in 1844, August 22, has not been observed at any one of its returns since that year. In 1850 its position in the

heavens was very unfavourable, and in 1855, when observations were expected, possibly from the prevalence of clouded skies, it escaped notice again. Nor at its returns in 1860 and 1866 was it detected, though in the former year it was sought for with the great refractor of the Harvard Observatory, and in the latter year I circulated a sweeping Ephemeris. Another return to perihelion must be approaching, but from the elaborate investigations of Prof. Brünnow, there appears to be so much uncertainty attaching to the value of the mean diurnal motion in 1844, notwithstanding the fine series of observations made by Mr. Otto Struve at Pulkova, that the date of next perihelion passage can hardly be assigned with any degree of confidence within several months. We must, therefore, in all probability depend upon the success of those who occupy themselves in sweeping the heavens for telescopic comets, to recover it once more. (See Professor Brünnow's remarks in the *Ann Arbor Astronomical Notices*, No. 3.)

The following values of the comet's heliocentric equatorial co-ordinates from 130 days before, to 90 days after perihelion, may perhaps assist in identifying it, should an accidental discovery be made:—

Days from Perihelion.	x	y	z	Log. r .
- 130	- 0.5221	- 1.6640	- 0.7401	0.27746
120	0.3791	1.6221	0.7280	0.25953
110	0.2343	1.5723	0.7123	0.24099
100	- 0.0881	1.5136	0.6927	0.22185
90	+ 0.0586	1.4452	0.6686	0.20228
80	0.2048	1.3663	0.6396	0.18248
70	0.3493	1.2759	0.6053	0.16272
60	0.4904	1.1732	0.5651	0.14344
50	0.6261	1.0577	0.5187	0.12513
40	0.7540	0.9290	0.4659	0.10850
30	0.8713	0.7874	0.4066	0.09434
20	0.9752	0.6338	0.3411	0.08348
- 10	1.0628	0.4696	0.2699	0.07654
0	1.1323	0.2974	0.1941	0.07428
+ 10	1.1812	- 0.1198	0.1148	
20	1.2101	+ 0.0598	- 0.0335	
30	1.2187	0.2384	+ 0.0483	
40	1.2086	0.4135	0.1295	
50	1.1817	0.5828	0.2088	
60	1.1401	0.7450	0.2856	
70	1.0859	0.8989	0.3592	
80	1.0212	1.0442	0.4294	
+ 90	+ 0.9480	+ 1.1807	+ 0.4960	

In computing the above co-ordinates the values of π , Ω , and B

in Prof. Brünnow's orbit for 1855 (*Mémoire sur la Comète Elliptique de De Vico*) were brought up to 1872.0 and adopted.

I may here remark that the time of the next return of Peters' periodical Comet is much more uncertain than that of De Vico's, and the only chance of recovering it will be in the manner I have alluded to above. The last calculations of Dr. Peters with reference to this comet are those detailed in Prof. Brünnow's *Astronomical Notices*, as I learned in conversation with Dr. Peters last December.

Elements and Ephemeris of the First Comet of 1871, discovered by Dr. Winnecke on April 7. By J. R. Hind, F.R.S.

From Dr. Winnecke's observation on April 7th and two at Mr. Bishop's Observatory on the 12th and 19th I have calculated the following parabolic elements, taking all the small corrections into account:—

Perihelion Passage, 1871, June 10.9958, G.M.T.

Longitude of Perihelion	139° 43' 19"	Mean Equinox 1871.0.
Longitude of Ascending Node ..	278° 40' 45"	
Inclination	87° 54' 10"	
Log. Perihelion distance.....	9.8292565.	

Motion direct.

$$\begin{aligned}x &= r \cdot [9.19083] \cdot \sin(v + 297° 33' 7''), \\y &= r \cdot [9.99486] \cdot \sin(v + 107° 37' 7''), \\z &= r \cdot [9.99985] \cdot \sin(v + 197° 51' 7').\end{aligned}$$

The following Ephemeris shows that there is a probability that the comet may be observed after the perihelion passage, if sought for at the Southern observatories:—

At Greenwich Noon.

1871.	R.A.	Decl.	Log. Δ.	Log. r.	$\frac{1}{r^2 \cdot \Delta^2}$
June 24	94° 11'	- 5° 50'	0.1509	9.8616	0.94
28	96° 44	10° 1	0.1356	9.8816	
July 2	99° 33	14° 21	0.1197	9.9041	0.90
6	102° 42	18° 50	0.1043	9.9281	
10	106° 17	23° 28	0.0900	9.9527	0.82
14	110° 23	28° 14	0.0775	9.9774	
18	115° 7	33° 5	0.0673	0.0017	0.73
22	120° 36	37° 54	0.0606	0.0255	
26	126° 59	42° 32	0.0580	0.0484	0.61
30	134° 23	- 46° 50	0.0595	0.0705	